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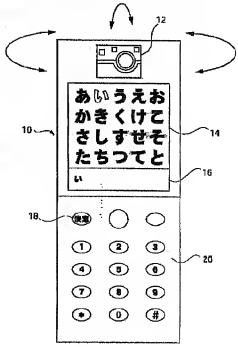
(54)【発明の名称】　携帯通信端末装置

(57)【要約】
【課題】　小型のキーボードを用いた場合でも文字の入力操作性を大幅に改善することができる携帯通信端末装置を提供する。
【解決手段】　所定のメニュー項目又は入力文字列を表示する表示部１４と、該表示部１４に表示されているメニュー項目又は入力文字列のうち少なくとも１つのメニュー項目又は入力文字にカーソルの位置を合わせるカーソル手段３２と、装置本体１０を縦軸と横軸の回りに回動させることによりこの回動方向と同方向にカーソルの位置を移動させるようにカーソル手段３２を制御する制御手段２８，３０とを備えた。



に、本発明による携帯通信端末装置は、所定のメニュー項目又は入力文字列を表示する表示部と、該表示部に表示されているメニュー項目又は入力文字列のうち少なくとも１つのメニュー項目又は入力文字にカーソルの位置を合わせるカーソル手段と、装置本体を縦軸と横軸の回りに回動させることによりこの回動方向と同方向に前記カーソルの位置を移動させるように前記カーソル手段を制御する制御手段とを備えたことを特徴とするものである。

【０００８】このような構成の携帯通信端末装置によれば、装置本体を縦軸と横軸の回りに回動させることにより、この回動方向と同方向にカーソル位置を移動させるようにしたため、操作が簡単で、片手での操作が可能で、カーソル位置の移動方向も上下方向及び左右方向の二方向に移動が可能であるため、小型のキーボードを用いた場合でも文字の入力操作性を大幅に改善することができる。

【０００９】

【発明の実施の形態】以下、本発明の実施の形態について、図面に基づいて具体的に説明する。図１ないし図４は、本発明による携帯通信端末装置の一実施の形態について説明するために参照する図である。

【００１０】図１は、本発明の一実施の形態に係る携帯電話機１０（携帯通信端末装置）を示す図である。同図に示す携帯電話機１０は、その上部にＣＣＤカメラ部１２（撮像部）が固定して（又は着脱自在に）設けられ、その下方に順に、後述する文字列が表示される第１表示部１４、入力されることが確定した文字を表示する第２表示部１６、後述する決定ボタン１８等の各種ボタンが配列された入力操作部２０が設けられている。

【００１１】図２は、携帯電話機１０の制御回路を示す図である。同図において、ＣＣＤカメラ部１２、第１表示部１４、第２表示部１６、及び決定ボタン１８は図１において示したものであり、この他に、画像処理部２２、記憶部２４、外部記憶部２６、画像認識部２７と制御部２８を有するＣＰＵ３０（制御手段）を具備している。そして携帯電話機１０はさらに、制御部２８に制御されて第１表示部１４に表示されるカーソル位置を駆動するカーソル駆動部３２（カーソル手段）を有している。

【００１２】以下に、図３のフローチャートに基づいて、携帯電話機１０の動作手順について説明する。文字入力モードがスタートすると、まずＣＣＤカメラ部１２がその近傍にあるユーザー（図示せず）の顔を撮像し、この撮像して得た初期データは画像処理部２２に送られて画像データ（図４（ａ）参照）として処理される。

【００１３】この画像データはＣＰＵ３０の画像認識部２７に送られて、枠内の像の位置を基準位置として設定し（ステップＳ１）、このときの画像データは基準画像データとして記憶部２４に記憶される。以降新たに基準画像データを設定しない限りはこの画像データを基準画像データとして使用する。

【００１４】制御部２８により第１表示部１４には、図１に示すような文字列の初期画面が表示され（ステップＳ２）、この文字列の初期画面の中央部の初期位置にはカーソル位置が表示される（ステップＳ３）。文字列としては、制御部２８が外部記憶部２６から呼び出した５０音表、アルファベット、漢字辞典、電話帳機能からの電話番号等が第１表示部１４に表示される。

【００１５】カーソル位置の表示は、その位置にある一文字の色が他の文字の色と異なる色に変換することにより表示されるようになっている。画像処理部２２は常時ＣＣＤカメラ部１２からの撮像データを画像処理し（ステップＳ４）、この画像処理した画像データは画像認識部２７に送られる。

【００１６】ユーザーが携帯電話機１０をいずれかの方向に回動したとき、その画像データは画像認識部２７において、記憶部２４に記憶された基準画像データと比較されることにより、画像が移動したかが判別される（ステップＳ５）。但し、携帯電話機１０の回動量が少ないときは手ぶれや誤操作等と認識されて、画像が移動したとは判別されない。

【００１７】画像が移動したと判別されたら（ステップＳ５のＹＥＳ）、画像が左に移動したかが判別され（ステップＳ７）、ＹＥＳのときは制御部２８がカーソル駆動部３２を制御して、カーソルの位置を第１表示部１４の中央位置（初期位置）から左に移動させる（ステップＳ８）。ちなみに、携帯電話機１０をその縦軸の回りに左側に回動させることにより、図４（ｂ）に示すように画像は左側に移動するようになっている。

【００１８】画像が左に移動しないとき（ステップＳ７のＮＯ）は右に移動したかが判別され（ステップＳ９）、ＹＥＳのときはカーソル駆動部３２によりカーソルの位置を第１表示部１４の中央位置から右に移動させる（ステップＳ１０）。ちなみに、携帯電話機１０をその縦軸の回りに右側に回動させることにより、図４（ｃ）に示すように画像は右側に移動するようになっている。

【００１９】画像が右に移動しないとき（ステップＳ９のＮＯ）は上に移動したかが判別され（ステップＳ１１）、ＹＥＳのときはカーソル駆動部３２によりカーソルの位置を上ではなく下に移動させるように、カーソル駆動部３２は制御部２８により制御されるようになっている（ステップＳ１２）。

【００２０】ちなみに、携帯電話機１０を横軸の回りに下側に回動させることにより、図４（ｄ）に示すように画像は上側に移動するようになっている。このため、携帯電話機１０を横軸の回りに下側に回動させたときはカーソルの位置を下に移動させることができる。

【００２１】画像が上に移動しないとき（ステップＳ１

力したい場合は、携帯電話機１０自体をその読み方の分からない文字の書き方の軌跡に沿って動かすことで、その文字の候補をリストアップし、そのうちから入力したい文字を選択して入力するようにすることもできる。

【００３６】この場合は、携帯電話機１０の動いた軌跡を画像認識部２７が認識して記憶部２４に記憶させ、制御部２８が外部記憶部２６から呼び出した漢字を記憶部２４に記憶させた字と比較して、似たような字をいくつかリストアップして第１表示部１４に表示させ、ユーザーがその中から１つの文字を選択して入力させることができる。

【００３７】このため、読み方が分からない文字でも入力することができる。この場合は何もしなければ、一筆書きのように文字以外の部分も本来の文字の軌跡に連続して文字の判別が難しくなってしまうので、文字の軌跡部分のみ決定ボタン１８を押して携帯電話機１０を動かし、文字の軌跡以外の部分は決定ボタン１８を押さないで携帯電話機１０を動かすようにしてもよい。

【００３８】以上、本発明の実施の形態について具体的に述べてきたが、本発明は上記の実施の形態に限定されるものではなく、本発明の技術的思想に基づいて、その他にも各種の変更が可能なものである。

【００３９】

【発明の効果】以上説明したように、本発明の携帯通信端末装置によれば、装置本体を縦軸と横軸の回りに回動させることにより、この回動方向と同方向にカーソルの位置を移動させるようにしたため、操作が簡単で、片手での操作が可能で、カーソル位置の移動方向も上下方向及び左右方向の二方向に移動が可能であるため、小型のキーボードを用いた場合でも文字の入力操作性を大幅に改善することができる。

【図面の簡単な説明】

【図１】本発明の一実施の形態に係る携帯電話機１０を示す正面図である。

【図２】図１の携帯電話機１０の制御回路を示すブロック図である。

【図３】図１の携帯電話機１０の動作手順を示すフローチャートである。

【図４】図１の携帯電話機１０のＣＣＤカメラ部１２が撮像した画像データを示す図であり、図４（ａ）は像が基準位置にある基準画像データを示す図であり、図４（ｂ）～（ｅ）は各々の方向に携帯電話機１０を回動させたときＣＣＤカメラ部１２が撮像した画像データを示す図である。

【符号の説明】

１０　携帯電話機
１２　ＣＣＤカメラ部
１４　第１表示部
１６　第２表示部
１８　決定ボタン
２０　入力操作部
２２　画像処理部
２４　記憶部
２６　外部記憶部
２７　画像認識部
２８　制御部
３０　ＣＰＵ
３２　カーソル駆動部

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EA12 EB05 FA02 FA05 FA14
FB22 FB24
5K027 AA11 BB02 FF22 HH26
5K067 AA34 BB04 EE02 FF02 FF23
FF31

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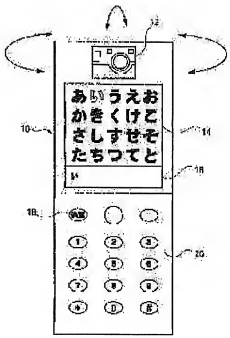
(71)Applicant : KYOCERA CORP
(72)Inventor : FUJISAWA RYUTA

(54) MOBILE COMMUNICATION TERMINAL

(57)Abstract:
PROBLEM TO BE SOLVED: To provide a mobile communication terminal that can remarkably improve the character entry operability even when a small-sized keyboard is employed.
SOLUTION: The mobile communication terminal is provided with a display section 14 that displays prescribed menu items or entered character strings, a cursor means 32 that matches a position of a cursor with at least one menu item or entered character among the menu items or the entered character string displayed on the display section 14, and control means 28, 30 that control the cursor means 32 by turning a terminal main body 10 around longitudinal and lateral axes to move the position of the cursor in the same direction as the turning direction.



* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1]A portable communication terminal comprising:
An indicator which displays a predetermined menu item or an input string.
A cursor means which doubles a position of cursor with at least one menu item or an input character among menu items or input strings which are displayed on this indicator.
A control means which controls said cursor means to move a position of said cursor in this moving direction and the direction by rotating a device main frame around a vertical axis and a horizontal axis.

[Claim 2]The portable communication terminal according to claim 1, wherein said control means controls to carry out scroll operation in which a position of said cursor carries out continuous movement in this moving direction and the direction by rotating said device main frame from usual at high speed.
[Claim 3]The portable communication terminal according to claim 1, wherein said control means controls to carry out scroll operation in which a position of said cursor carries out continuous movement in this moving direction and the direction by more than a predetermined angle rotating said device main frame from a reference position.
[Claim 4]A portable communication terminal comprising:
An image pick-up part which picturizes a picture.
An indicator which displays a predetermined menu item or an input string.
A cursor means which doubles a position of cursor with at least one menu item or an input character among menu items or input strings which are displayed on this indicator.
A control means which controls said cursor means to move a position of said cursor based on change of an imaging screen of said image pick-up part.

[Claim 5]The portable communication terminal according to claim 4 controlling said control means to carry out continuous movement of the position of said cursor in the direction based on this change when an imaging screen of said image pick-up part changes rapidly.
[Claim 6]The portable communication terminal according to claim 4 having a memory measure which memorizes a picture which serves as a standard among pictures picturized by said image pick-up part, and said control means's comparing a picture outputted by said image pick-up part with said memorized reference image, and controlling said cursor means.
[Claim 7]The portable communication terminal according to claim 6 controlling said control means to carry out continuous movement of the position of said cursor in the direction based on this displacement when an imaging screen of said image pick-up part is displaced to said memorized reference image beyond as for a predetermined value.
[Claim 8]When it has a determination button which becomes final and conclusive a menu item or an input character in which said cursor is located and this determination button is pushed, The portable communication terminal according to claim 1 or 4 characterized by said control means controlling so that operation corresponding to a menu item in which said cursor is located may be carried out or an input character may be inputted.

[Claim 9]So that a display of said indicator, such as enlarging each character of said menu item or an input string by bringing said whole device close to a user, or keeping it away, or making it small, may change in three dimensions, The portable communication terminal according to claim 1 or 4, wherein said control means controls.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]Especially this invention relates to the portable communication terminal which aimed at improvement in the operativity at the time of the character input, concerning portable communication terminals, such as a portable telephone, for example.
[0002]
[Description of the Prior Art]The character input method with which the keyboard was mainly used for the character input method in a personal computer (personal computer), a word processor (word processor), etc. was almost the case. In the case of the character input method using such a keyboard, there is no restriction of a size not much, and since there is abundant kinds of key, the operativity of the character input is good.
[0003]
[Problem(s) to be Solved by the Invention]Also in portable communication terminals, such as a portable telephone, the thing using the keyboard as a character input method is almost the case. However, since portable communication terminals, such as a portable telephone, are small, it becomes small [the keyboard], and since there are few the kinds and numbers (button), when inputting a character, time and effort is that in which starting operativity got worse dramatically.
[0004]That is, since inputting one character also needs to press the same key repeatedly or very many functions and choices are assigned to one key, that it must be memorized is also worsening operativity. For this reason, an erroneous input breaks out easily, and it is not few also when that correction is difficult.
[0005]Although there are also a method of inputting a character using the touch panel which such a keyboard is used, and also searches a character with an attached pen and is touched, and the method of rotating a character string using a revolving dial, and searching and inputting a character, It has the problem that the input method of the former character cannot perform operation single hand, and it cannot be inputted if you forget an attached pen, It has the problem that the input method of the latter character can move cursor only to same one way as the hand of cut of a revolving dial by operating a revolving dial, and neither of the character input methods has resulted in the extensive improvement of operativity.
[0006]Then, in view of the above-mentioned problem, this invention makes it SUBJECT to provide the portable communication terminal which can improve the alter operation nature of a character substantially, even when a small keyboard is used.
[0007]
[Means for Solving the Problem]This invention is characterized by a portable communication terminal comprising the following, in order to solve an aforementioned problem.
An indicator which displays a predetermined menu item or an input string.
A cursor means which doubles a position of cursor with at least one menu item or an input character among menu items or input strings which are displayed on this indicator.
A control means which controls said cursor means to move a position of said cursor in this moving direction and the direction by rotating a device main frame around a vertical axis and a horizontal axis.

[0008]Since it was made to move the cursor position in this moving direction and the direction by rotating a device main frame around a vertical axis and a horizontal axis according to the portable communication terminal of such composition, operation is easy, Operation single hand is possible, and for [of a sliding direction and a longitudinal direction] two way types, since it can move, the move direction of the cursor position can also improve the alter operation nature of a character substantially, even when a small keyboard is used.
[0009]
[Embodiment of the Invention]Hereafter, an embodiment of the invention is concretely described based on a drawing. Drawing 1 thru/or drawing 4 are figures referred to in order to describe the 1 embodiment of the portable communication terminal by this invention.
[0010]Drawing 1 is a figure showing the portable telephone 10 (portable communication terminal) concerning the 1 embodiment of this invention. The CCD camera part 12 (image pick-up part) fixes to the upper part, and the portable telephone 10 shown in the figure is formed in it (or attachment and detachment are free), The 1st indicator 14 as which the character string mentioned later in order caudad is displayed, the 2nd indicator 16 that displays the character which being inputted became final and conclusive, and the alter operation part 20 for which the various buttons of the determination button 18 grade mentioned later were arranged are formed.
[0011]Drawing 2 is a figure showing the control circuit of the portable telephone 10. In the figure, CPU30 (control means) which shows the CCD camera part 12, the 1st indicator 14, the 2nd indicator 16, and the determination button 18 in drawing 1, in addition has the image processing portion 22, the storage parts store 24, the enternal memory part 26, the image recognition section 27, and the control section 28 is provided. And the portable telephone 10 has the cursor actuator 32 (cursor means) which drives the cursor position which is controlled by the control section 28 and is further displayed on the 1st indicator 14.
[0012]Below, the operation procedures of the portable telephone 10 are explained based on the flow chart of drawing 3. If a character input mode starts, the face of the user (not shown) who has the CCD camera part 12 in that neighborhood first is picturized, and this initial data picturized and obtained will be sent to the image processing portion 22, and will be processed as image data (refer to drawing 4 (a)).
[0013]This image data is sent to the image recognition section 27 of CPU30, the position of an image within the limit is set up as a reference position (Step S1), and the image data at this time is memorized by the storage parts store 24 as reference image data. Unless reference image data is newly set up henceforth, this image data is used as reference image data.
[0014]The initial screen of a character string as shown in drawing 1 by the control section 28 at the 1st indicator 14 is displayed (Step S2), and the cursor position is displayed on the initial position of the center section of the initial screen of this character string (Step S3). As a character string, 50 sound table, the alphabet, a Chinese character dictionary, a telephone number from a telephone directory function, etc. which the control section 28 called from the enternal memory part 26 are displayed on the 1st indicator 14.
[0015]The display of the cursor position is displayed when the color of a single character in the position changes into the color of other characters, and a different color. The image processing portion 22 always carries out image processing of the imaging data from the CCD camera part 12 (step S4), and this image data that carried out image processing is sent to the image recognition section 27.
[0016]When a user rotates the portable telephone 10 in the direction of either, it is distinguished whether the picture moved the image data by being compared with the reference image data memorized by the storage parts store 24 in the image recognition section 27 (Step S5). However, when there is little rotational quantity of the portable telephone 10, it is recognized as blurring, an operation mistake, etc., and it is not distinguished that the picture moved.
[0017]If it is distinguished that the picture moved (YES of Step S5), a picture moves to the left, and when [mere] it is distinguished (Step S7) and is YES, the control section 28 will control the cursor actuator 32, and will move the position of cursor to the left from the middle position (initial position) of the 1st indicator 14 (Step S8). Incidentally, by making left-hand side rotate

the portable telephone 10 around the vertical axis, as shown in drawing 4 (b), a picture moves to left-hand side.

[0018]When a picture does not move to the left (NO of Step S7), it moves to the right, and when [mere] it is distinguished (step S9) and is YES, the position of cursor is moved to the right from the middle position of the 1st indicator 14 by the cursor actuator 32 (Step S10). Incidentally, by making right-hand side rotate the portable telephone 10 around the vertical axis, as shown in drawing 4 (c), a picture moves to right-hand side.

[0019]So that it moves upwards, and the position of cursor may be moved to the bottom upwards instead of by the cursor actuator 32 when [mere] it is distinguished (Step S11) and is YES when a picture does not move to the right (NO of step S9), The cursor actuator 32 is controlled by the control section 28 (Step S12).

[0020]Incidentally, by making the bottom rotate the portable telephone 10 around a horizontal axis, as shown in drawing 4 (d), a picture moves to the upper part. For this reason, when the bottom is made to rotate the portable telephone 10 around a horizontal axis, the position of cursor can be moved downward.

[0021]So that it moves downward, and the position of cursor may be moved to the top instead of the bottom by the cursor actuator 32 when [mere] it is distinguished (Step S13) and is YES when a picture does not move upwards (NO of Step S11), The cursor actuator 32 is controlled by the control section 28 (Step S14).

[0022]Incidentally, by making the upper part rotate the portable telephone 10 around a horizontal axis, as shown in drawing 4 (e), a picture moves to the bottom. For this reason, when the upper part is made to rotate the portable telephone 10 around a horizontal axis, the position of cursor can be moved upwards.

[0023]Since directions of movement of the position of the cursor to have doubled with the movement magnitude of the picture which the CCD camera part 12 picturized come out from the control section 28 of CPU30 when it is judged that there was movement of a picture, Only the part which doubled the position of cursor with the movement magnitude of the picture by the cursor actuator 32 which received the directions makes it move. When the amount of how many characters also jump over the position of cursor and it is moved greatly, it can carry out by scrolling a character string so that it may mention later.

[0024]Thus, as it repeats rotating the portable telephone 10 around a vertical axis or a horizontal axis, for example, it is shown in drawing 1, If the position of cursor is brought to the place of "being" of a character to input (Step S15), the determination button 18 of the alter operation part 20 shown in drawing 1 will be pushed, The selected character of "being" is become final and conclusive (YES of Step S16), and it is made to display on the 2nd indicator 16 as a character to input the selected character of "being" into.

[0025]And if (YES of Step S17) and a character to return to step S4 again, repeat the same operation as the above, and input into the next are lost when there is a character to input into the next (NO of Step S17), a character input mode will be ended.

[0026]Thus, since it was made for the portable telephone 10 to move the position of the above-mentioned cursor in a moving direction and the direction each time by repeated and rotating a device main frame around a vertical axis and a horizontal axis, operation is easy and an erroneous input cannot break out easily. Since the user should push only the determination button 18, and the have substitute of a hand is unnecessary, operation single hand is possible for him. Not only to a sliding direction but to a longitudinal direction, since it can move, the move direction of the position of cursor can also improve the alter operation nature of a character substantially.

[0027]By the way, when the portable telephone 10 is rotated around a vertical axis or a horizontal axis and it has gone too far beyond a character to input into the cursor, Although what is necessary is just to make an opposite direction rotate the portable telephone 10, the rotation (rotation of return) from the position which the point rotated in this case to the center valve position (reference position) before rotation of the portable telephone 10 is canceled so that it may not be recognized as rotation, After passing the center valve position of the portable telephone 10, it is recognized as rotation of the opposite direction.

[0028]Therefore, when returning the portable telephone 10 to the center valve position of origin legible for a user noting that I will look at the position of the cursor after movement of the 1st indicator 14, rotation is not recognized as rotation for moving the position of cursor.
[0029]When the state where the rotation exceeded the specified quantity when the portable telephone 10 was rotated is maintained (when difference data with a reference image exceeds a predetermined value), the character string of the 1st indicator 14 can continue scrolling to the moving direction. Also when speed when rotating the portable telephone 10 exceeds a predetermined value, the character string of the 1st indicator 14 can continue scrolling to the moving direction (when difference data with a reference image changes rapidly). And the scroll operation of such a character string can be stopped by returning the portable telephone 10 to a center valve position.
[0030]In order to prevent the position of cursor from recognizing it as rotation of the portable telephone 10 since the background of the picture moved to not rotating the portable telephone 10 when having taken the train, and changing, By canceling and distinguishing only the existence of movement of the picture of a center section within the limit, the picture of a periphery within the limit including a background can change the position of cursor.
[0031]Thus, when it is not necessary to cancel movement of a background (i.e., even when not having taken a train etc.), the picture of a periphery within the limit including a background is canceled, and it may be made to distinguish only the existence of movement of the picture of a center section within the limit. By doing in this way, the data volume to process decreases, high speed processing becomes possible compared with the case where all the data of the whole within the limit is processed, and the burden of CPU30 also becomes light.
[0032]Although only the case where the portable telephone 10 was rotated in the above-mentioned embodiment was explained, The portable telephone 10 may be brought close to a user's face, or may be kept away, and the display of the 1st indicator 14, such as enlarging each character of the character string of the 1st indicator 14, or making it small, can also be changed in three dimensions by moving the portable telephone 10 in this way.
[0033]Although the case where the position of cursor was doubled with one character in an input string in the above-mentioned embodiment was explained, it can also be used besides a character, for example so that the position of cursor may be doubled with one menu item in two or more menu items.
[0034]Although the CCD camera part 12 detects rotation of the portable telephone 10 and its direction in the above-mentioned embodiment, it may be made to detect rotation of the portable telephone 10 and its direction by a thing, for example like a gyrocompass other than the CCD camera part 12.
[0035]Although he was trying to choose a character to input in the above-mentioned embodiment by doubling the position of cursor with a single character of the character strings of the 1st indicator 14, It is moving portable telephone 10 the very thing along with the locus of the calligraphy of the character which does not understand the reading, and the candidate of the character is listed, and a character to input from the inside of it is chosen and can be inputted to input the character which does not understand reading as another usage.
[0036]In this case, the image recognition section 27 recognizes the locus to which the portable telephone 10 moved, make the storage parts store 24 memorize, and the Chinese character which the control section 28 called from the enternal memory part 26 is compared with the character which the storage parts store 24 was made to memorize, Some similar characters can be listed, it can be made to be able to display on the 1st indicator 14, and a user can make one character choose and input from the inside.
[0037]For this reason, it can input also in the character which reading does not understand. In this case, like a picture drawn without lifting the brush from the paper, if nothing is done, since distinction of a character becomes difficult succeeding the locus of an original character, portions other than a character, Only the locus portion of a character pushes the determination button 18, and the portable telephone 10 is moved, and it may be made for portions other than the locus of a character to move the portable telephone 10 without pushing the determination button 18.

[0038]As mentioned above, although the embodiment of the invention has been described concretely, this invention is not limited to the above-mentioned embodiment, and various kinds of change is possible for it based on the technical idea of this invention.
[0039]
[Effect of the Invention]Since it was made to move the position of cursor in this moving direction and the direction by rotating a device main frame around a vertical axis and a horizontal axis according to the portable communication terminal of this invention as explained above, operation is easy, Operation single hand is possible, and for [of a sliding direction and a longitudinal direction] two way types, since it can move, the move direction of the cursor position can also improve the alter operation nature of a character substantially, even when a small keyboard is used.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]It is a front view showing the portable telephone 10 concerning the 1 embodiment of this invention.
[Drawing 2]It is a block diagram showing the control circuit of the portable telephone 10 of drawing 1.
[Drawing 3]It is a flow chart which shows the operation procedures of the portable telephone 10 of drawing 1.
[Drawing 4]It is a figure showing the image data which the CCD camera part 12 of the portable telephone 10 of drawing 1 picturized, Drawing 4 (a) is a figure showing the reference image data which has an image in a reference position, and drawing 4 (b) - (e) is a figure showing the image data which the CCD camera part 12 picturized, when rotating the portable telephone 10 in each direction.
[Description of Notations]
10 Portable telephone
12 CCD camera part
14 The 1st indicator
16 The 2nd indicator
18 Determination button
20 Alter operation part
22 Image processing portion
24 Storage parts store
26 Enternal memory part
27 Image recognition section
28 Control section
30 CPU
32 Cursor actuator

[Translation done.]